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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,206	11/27/2001	Christopher L. Hill	STL10005	9541

7590 08/28/2009  
FELLERS, SNIDER, BLANKENSHIP, BAILEY & TIPPENSK, PC  
BANK ONE TOWER  
100 NORTH BROADWAY  
SUITE 1700  
OKLAHOMA CITY, OK 73102-8820

EXAMINER
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GLASS, ERICK DAVID

ART UNIT	PAPER NUMBER
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2837

MAIL DATE	DELIVERY MODE
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08/28/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/995,206	<b>Applicant(s)</b> HILL ET AL.	
	<b>Examiner</b> Erick Glass	<b>Art Unit</b> 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4/30/09.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 34-42, 44-48 and 51-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 41, 42, 44-46, 55 and 57-60 is/are allowed.
- 6) ☒ Claim(s) 34-40, 47, 48, 51-54 and 56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 34-38, 40, and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu et al (US 5,832,324).

With respect to claim 34, Shimizu teaches a circuit (fig. 1) that monitors (fig. 1, 4) a cumulative amount of charge associated with a power supply (fig. 1, 3), wherein power is removed from a load so that the load receives no power (column 8, lines 30-35) when the cumulative amount of charge is at least equal to a predetermined value (fig. 3, Vcc1Max) from a profile (fig. 3) of said values that decrease in magnitude (column 10, lines 16-17) during application of power to said load.

With respect to claim 35, Shimizu teaches wherein the load is a motor (fig. 2, B1).

With respect to claim 36, Shimizu teaches comprising drivers (fig. 1, 5) that are disabled responsive to the cumulative amount of charge being at least equal to the predetermined value.

With respect to claim 37, Shimizu teaches wherein the predetermined value is based on an amount of charge that will cause a spike (fig. 12, Vcc2) when the amount of charge is removed from the power supply.

With respect to claim 38, Shimizu teaches wherein the cumulative amount of charge is monitored with an integrative device (fig. 1, 4).

With respect to claim 40, Shimizu teaches wherein the circuit minimizes a spike on the (fig. 12, Vcc1) power supply.

With respect to claim 47, Shimizu monitoring (fig. 1, 4) a charge amount being removed from a power supply (fig. 1,3) and decoupling the power supply from a load so that the load receives no power (column 8, lines 30-35) responsive to the charge amount being at least equal to a predetermined level (fig. 3, Vcc1Max) selected from a profile (fig. 3) of said levels that decrease (column 10, lines 16-17) in magnitude during application of power to said load.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 39, 48, 51-54, 56 are rejected under 35 U.S.C. 103(a) as being obvious over Shimizu (US 5,832,324).

With respect to claim 39 and 48, Shimizu does not teach wherein the load is an inductive type. Shimizu teaches different motor and loads can be used (column 1, lines 38-44). It would have been obvious to one having ordinary skill in the art at the time of the invention to substitute one known element, an induction motor for the load have yielded predictable results.

With respect to claim 51, Shimizu teaches wherein the power supply is decoupled (column 8, lines 30-35) from the load for a predetermined time (column 8, lines 40-48).

With respect to claim 52, Shimizu teaches wherein the amount of charge being removed from the power supply of the monitoring step is monitored (fig. 1, 4). Shimizu does not teach sensing an amount of current flowing through the load. It would have been obvious to one having ordinary skill in the art at the time of the invention to substitute one known element, and current sensor in place of a voltage sensor yielded predictable results of monitoring current.

With respect to claim 53, Shimizu teaches wherein the monitoring step further comprises accumulating charge (fig. 3, Vcc1) in relation to the sensed amount of current flowing through the load.

With respect to claim 54, Shimizu teaches wherein the profile (fig. 12, VSW2) is applied during acceleration (fig. 12, boosted during driving) of the motor to an operational velocity.

With respect to claim 56, Shimizu teaches wherein the load of the decoupling step comprises a motor (fig. 2, B1), and wherein the profile is applied during acceleration (fig. 12, boosted during driving) of the motor to an operational velocity.

### ***Allowable Subject Matter***

With respect to claims 41 and 57, the Prior Art does not teach a motor coupleable to a power supply; a sensor coupleable to the motor; and a control circuit including a comparator coupled between an input and an output, the input being coupleable to the sensor, wherein the control circuit provides an output signal on the output responsive to an amount of charge provided from the power supply that is at least equal to a predetermined threshold, the predetermined threshold selected from a profile of said thresholds that decrease in magnitude during application of power to said motor. Claims 41, 42, 44-46, 55 and 57-60 are allowable.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2837

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is (571)272-8395. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BENTSU RO/  
Primary Examiner, Art Unit 2837

/Erick Glass/  
Examiner, Art Unit 2837